


PTO/SB/08A (08-03)

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<b>Substitute for form 1449A/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				APPLICATION NUMBER	10/755,997
				FILING DATE	01/03/2004
				FIRST NAMED INVENTOR	Bailey et al.
				Group Art Unit	1756
				Examiner Name	Unassigned
				Attorney Docket Number	PA99-41D21
Sheet	1	of	2		

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document/ MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
EC	C1	5,206,983		Guckel et al.	5/4/1993	
	C2	5,669,303		Maracas et al.	9/23/1997	
	C3	6,316,290		Wensel	11/13/2001	
	C4	6,387,787		Mancini et al.	5/14/2002	
	C5	6,180,929		Wang et al.	2/20/2001	
	C6	2005/0100830		Xu et al.	5/12/2005	
	C7	6,890,688		Mancini et al.	5/10/2005	
	C8	6,908,861		Sreenivasan et al.	6/21/2005	
	C9	6,916,584		Sreenivasan et al.	7/12/2005	
	C10	6,921,615		Sreenivasan et al.	7/28/2005	
	C11	6,916,685		Sreenivasan et al.	7/12/2005	
	C12	6,919,152		Sreenivasan et al.	7/19/2005	
	C13	5,853,446		Carre et al.	12/29/1998	
	C14	6,251,207		Schultz et al.	6/26/2001	

Examiner Signature		Date Considered	5/29/06
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\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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Sheet 2 of 2				Examiner Name	Unassigned
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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>

EC	C15	SHIBUICHI ET AL., Super Water- and Oil-Repellent Surfaces Resulting from Fractal Structure, Journal of Colloid and Interface Science, Vol. 208, no. 1, pp. 287-294 12/1/1998	
	C16	APPLICATION NO. 10/827,118, naming Inventors Watts et al., entitled A Method of Forming a Deep-Featured Template Employed in Imprint Lithography, filed 4/19/2004	
	C17	APPLICATION NO. 10/917,761, naming Inventors McMackin et al., entitled A Moat System for an Imprint Lithography Template, filed 8/13/2004	
	C18	APPLICATION NO. 11/136,897, naming Inventors Miller et al., entitled Imprint Lithography Template Having a Coating to Reflect and/or Absorb Actinic Energy, filed 5/25/2005	

Examiner Signature		Date Considered	5/29/06
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				<b>FILING DATE</b>	01/13/2004
				<b>FIRST NAMED INVENTOR</b>	Bailey et al.
				<b>Group Art Unit</b>	1756
<b>Sheet</b>	<b>1</b>	<b>of</b>	<b>2</b>	<b>Examiner Name</b>	Unassigned
				<b>Attorney Docket Number</b>	PA99-41D21

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Examiner Signature		Date Considered	5/29/08
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<i>FL</i>	D4	THOMPSON ET AL., Fabrication of Step and Flash Imprint Lithography Templates Using Commercial Mask Processes, SPIE Microlithography Conference 2/1/2003	

Examiner Signature	<i>E. L. L.</i>	Date Considered	5/29/06
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Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			<b>Complete if Known</b>		
			Application Number	10/755,997	
			Filing Date	01/13/2004	
			First Named Inventor	Todd Bailey	
			Group Art Unit	1756	
			Examiner Name	Unassigned	
			Attorney Docket Number	PA99-41D21	
Sheet	1	of	2		

U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
EC	A1	2004/0168588	A1	Choi et al.	9/2/2004	
	A2	2004/0149687	A1	Choi et al.	8/5/2004	
	A3	2003/0215577	A1	Willson et al.	11/20/2003	
	A4	2004/0007799	A1	Choi et al.	1/15/2004	
	A5	2004/0008334	A1	Sreenivasan et al.	1/15/2004	
	A6	2004/0021254	A1	Sreenivasan et al.	2/5/2004	
	A7	2004/0021866	A1	Watts et al.	1/5/2004	
	A8	2004/0124566	A1	Sreenivasan et al.	7/13/2004	
	A9	2004/0141163	A1	Bailey et al.	7/22/2004	
	A10	2004/0163563	A1	Bailey et al.	8/26/2004	
	A11	2004/0251775	A1	Choi et al.	12/16/2004	
	A12	2004/0009673	A1	Sreenivasan et al.	1/15/2004	
	A13	2004/0022888	A1	Sreenivasan et al.	2/5/2004	
	A14	2004/0053146	A1	Sreenivasan et al.	3/18/2004	
	A15	2004/0086793	A1	Sreenivasan et al.	5/6/2004	
	A16	2004/0104641	A1	Choi et al.	6/3/2004	
	A17	2004/0169441	A1	Choi et al.	9/2/2004	
	A18	2004/0170771	A1	Bailey et al.	9/2/2004	
	A19	2004/0189994	A1	Sreenivasan et al.	9/30/2004	
	A20	2004/0189998	A1	Sreenivasan et al.	9/30/2004	
	A21	2004/0200411	A1	Willson et al.	10/14/2004	
	A22	2004/0209177	A1	Sreenivasan et al.	10/21/2004	
	A23	6,696,220	B2	Bailey et al.	2/24/2004	
	A24	6,842,229	B2	Sreenivasan et al.	1/11/2005	

Examiner Signature		Date Considered	5/29/05
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Substitute for form 1449B/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Application Number	10/755,997
		Filing Date	01/13/2004
		First Named Inventor	Todd Bailey
		Group Art Unit	1756
		Examiner Name	Unassigned
		Attorney Docket Number	PA99-41D21
Sheet	2	of	2

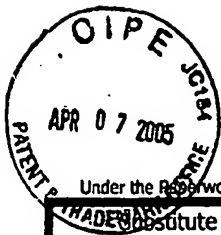
OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cita No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
EL	A25	U.S. App. No. 10/614716, filed 7/7/2003, entitled: Conforming Template for Patterning Liquids Disposed on Substrates, naming inventors Sreenivasan et al.	
	A26	U.S. App. No. 10/785248, filed 2/24/2004, entitled: Method to Control the Relative Position Between a Body and a Substrate, naming inventors Sreenivasan et al.	
	A27	U.S. App. No. 10/864214, filed 6/9/2004, entitled: Imprint Lithography System to Produce a Light to Impinge upon and Polymerize a Liquid in Superimposition with Template Overlay Marks, naming inventors Sreenivasan et al.	
	A28	U.S. App. No. 10/923629, filed 8/20/2004, entitled: Apparatus for Imprint Lithography Using an Electric Field, naming inventors Sreenivasan et al.	
	A29	U.S. App. No. 10/978285, filed 10/29/2004, entitled: Step and Flash Imprint Lithography, naming inventors Willson et al.	

Examiner Signature		Date Considered	5/29/06
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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 7

**Complete if Known**

APPLICATION NUMBER 10/755,997

FILING DATE 01/13/2004

FIRST NAMED INVENTOR Bailey et al.

Group Art Unit 1756

Examiner Name Unassigned

Attorney Docket Number PA99-41D21

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	B2	5,425,848		Haisma et al.	6/20/1995	
	B3	5,772,905		Chou	6/30/1998	
	B4	6,309,580	B1	Chou	10/30/2001	
	B5	6,334,960	B1	Willson et al.	1/1/2002	
	B6	6,391,217	B2	Schaffer et al.	5/21/2002	
	B7	6,517,977	B2	Resnick et al.	2/11/2003	
	B8	10/687,519		Nguyen et al.	10/16/2003	
	B9	2002/0177319	A1	Chou	11/28/2002	
	B10	2003/0205657	A1	Voisin	11/6/2003	
	B11	6,713,238	B1	Chou et al.	3/30/2004	
	B12	2003/0113638	A1	Mancini et al.	6/19/2003	
	B13	6,646,662	B1	Nebashi et al.	11/11/2003	
	B14	6,776,094	B1	Whitesides et al.	8/17/2004	
	B15	6,518,189	B1	Chou	2/11/2003	
	B16	2002/0132482	A1	Chou	9/19/2002	
	B17	2002/0167117	A1	Chou	11/14/2002	
o	B18	6,482,742	B1	Chou	11/19/2002	

Examiner  
Signature

Date

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<b>Sheet</b>	<b>2</b>	<b>of</b>	<b>7</b>	<b>Examiner Name</b>	Unassigned
				<b>Attorney Docket Number</b>	PA99-41D21

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EC	B19	2003/0080471	A1	Chou	5/1/2003	
	B20	2004/0036201	A1	Chou et al.	2/26/2004	
	B21	2004/0192041	A1	Jeong et al.	9/30/2004	
	B22	6,828,244	B2	Chou	12/7/2004	
	B23	6,809,356	B2	Chou	10/26/2004	
	B24	2004/0197843	A1	Chou et al.	10/7/2004	
	B25	2004/0156108	A1	Chou et al.	8/12/2004	
	B26	2004/0137734	A1	Chou et al.	7/15/2004	
	B27	2004/0131718	A1	Chou et al.	7/8/2004	
	B28	2004/0118809	A1	Chou et al.	6/24/2004	
	B29	2004/0046288	A1	Chou	3/11/2004	
	B30	2003/0080472	A1	Chou	5/1/2003	
	B31	2003/0034329	A1	Chou	2/20/2003	
	B32	2002/0042027	A1	Chou et al.	4/11/2002	
	B33	10/666,527		Bailey et al.	9/18/2003	
	B34	6,580,172	B2	Mancini et al.	6/17/2003	
	B35	4,722,878		Watakabe et al.	2/2/1988	
✓	B36	2002/0175298	A1	Moniwa et al.	11/28/2002	

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Substitute for form 1449A/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				<b>APPLICATION NUMBER</b>	10/755,997
				<b>FILING DATE</b>	01/13/2004
				<b>FIRST NAMED INVENTOR</b>	Bailey et al.
				<b>Group Art Unit</b>	1756
				<b>Examiner Name</b>	Unassigned
<b>Sheet</b>	3	of	7	<b>Attorney Docket Number</b>	PA99-41D21

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			

EA	B37	10/670,980		Sreenivasan et al.	9/25/2003	
	B38	10/706,537		Sreenivasan et al.	11/12/2003	
	B39	10/833,240		Watts et al.	4/27/2004	
	B40	10/782,187		McMackin et al.	2/19/2004	
	B41	10/895,214		Voison	7/20/2004	
	B42	11/051,941		McMackin et al.	2/4/2005	
	B43	4,512,848		Deckman et al.	4/23/1985	
	B44	6,517,995	B1	Jacobenson et al.	2/11/2003	
	B45	2004/0110856	A1	Young et al.	6/10/2004	
	B48	6,716,754	B2	Hofmann et al.	4/6/2004	
	B47	2002/0135099	A1	Robinson et al.	9/26/2002	
	B48	5,028,366		Harakal et al.	7/2/1991	
	B49	5,601,641		Stephens	2/11/1997	
	B50	5,849,209		Kindt-Larsen et al.	12/15/1998	
	B51	5,849,222		Jen et al.	12/15/1998	

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		Office	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				

EL	B52	WO	00/21689		Chou et al.	4/20/2000		
	B53	JP	02-92603		Kurikawa et al.	4/3/1990		
	B54	JP	02-24848		Kamio	1/26/1990		
	B55	WO	01/47003		Steiner et al.	6/28/2001		
	B56	WO	02/07199		Chou	1/24/2002		
	B57	WO	2004/114016		Chou et al.	12/29/2004		
	B58	WO	99/05724		Chou et al.	2/4/1999		
	B59	WO	03/010289		Chou et al.	2/6/2003		
	B60	WO	03/079416		Chou	9/25/2003		
↓	B61	WO	03/099536		Chou et al.	12/4/2003		

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				<b>Examiner Name</b>	Unassigned
Sheet      5      of      7				<b>Attorney Docket Number</b>	PA99-41D21

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>

EC	B62	Chou, Nanoimprint Lithography and Lithographically Induced Self-Assembly, MRS Bulletin, pp. 512 - 517, 7/1/2001	
	B63	Choi et al., Design of Orientation Stages for Step and Flash Imprint Lithography, Precision Engineering, pp. 192 - 199, 1/1/2001	
	B64	Colburn et al., Step and Flash Imprint Lithography for sub-100 nm Patterning, Proceedings of SPIE Vol. 3997, pp. 453 - 457, 1/1/2000	
	B65	Chou et al., Imprint Lithography with 25-Nanometer Resolution, Science Vol. 272, pp. 85 - 87, 4/5/1996	
	B66	Chou et al., Imprint Lithography with Sub-10 nm Feature Size and High Throughput, Microelectronic Engineering 35, pp. 237 - 240, 1/1/1997	
	B67	Haisma et al., Mold-assisted Nanolithography: A Process for Reliable Pattern Replication, J. Vac. Sci. Technol. B, pp 4124 - 4128, 11/1/1996	
	B68	Chou et al., Imprint of Sub-25 nm Vias and Trenches in Polymers, Appl. Phys. Lett. 67 (21), 11/20/1995	
	B69	Johnson et al., Advances in Step and Flash Imprint Lithography, SPIE Microlithography Conference, 2/23/2003	
D	B70	Chou et al., Lithographically Induced Self-assembly of Periodic Polymer Micropillar Arrays, J. Vac. Sci. Technol. B 17 (6), pp. 3197 - 3202, 11/1/1999	

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				<b>FIRST NAMED INVENTOR</b>	Bailey et al.
				<b>Group Art Unit</b>	1756
				<b>Examiner Name</b>	Unassigned
Sheet <b>6</b> of <b>7</b>				<b>Attorney Docket Number</b>	PA99-41D21

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite, No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup> ~
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EL	B71	Colburn et al., Step and Flash Imprint Lithography: A New Approach to High-Resolution Patterning, Proc. Of SPIE, vol. 3676, 3/1/1999	
	B72	Heidari, Nanoimprint Lithography at the 6 in. Wafer Scale, J. Vac. Sci. Technol. B 18(6), pp. 3557 - 3560, 11/1/2000	
	B73	Translation of Japanese Patent 02-92603	
	B74	Translation of Japanese Patent 02-24848	
	B75	Chou et al., Ultrafast and Direct Imprint of Nanostructures in Silicon, Nature, Col. 417, (June 2002), pp. 835-837, 6/1/2002	
	B76	Chou et al., Nanoimprint Lithography, Journal of Vacuum Science Technolgy B 14(16), pp. 4129-4133, 11/1/1996	
	B77	Colburn et al., Development and Advantages of Step-and-Flash Lithography, Solid State Technology, 7/1/2001	
	B78	Resnick et al., High Resolution Templates for Step and Flash Imprint Lithography, Journal of Microlithography, Microfabrication, and Microsystems. Vol 1. No. 3., 10/1/2002	
o	B79	Colburn et al., Characterization and Modeling of Volumetric and Mechanical Properties for Step and Flash Imprint Lithography Photopolymers, Journal of Vacuum Science Technology. Vol b. 19(6), 11/1/2001	

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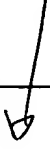

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	B80	Bailey et al., Step and Flash Imprint Lithography: Defect Analysis, Journal of Vacuum Science, B 19(6), pp. 2806-2810, 11/1/2001	
	B81	Bailey et al., Step and Flash Imprint Lithography: Template Surface Treatment and Defect Analysis, Journal of Vacuum Science, B 18(6), pp. 3572-3577, 11/1/2000	
	B82	Schneider et al., Stripes of Partially Fluorinated Alkyl Chains: Dipolar Langmuir Monolayers	

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EC	E1	4,959,252		Bonnebat et al.	9/25/1990	
	E2	5,259,926		Kuwabara et al.	9/9/1993	
	E3	5,348,616		Hartman et al.	9/20/1994	
	E4	5,512,131		Kumar et al.	4/30/1996	
	E5	5,545,367		Bae et al.	8/13/1996	
	E6	5,776,748		Singhvi et al.	7/7/1998	
	E7	5,948,470		Harrison et al.	9/7/1999	
	E8	5,952,127		Yamanaka	9/14/1999	
	E9	6,051,345		Huang	4/18/2000	
	E10	6,218,316	B1	Marsh	4/17/2001	
	E11	4,201,800		Alcom et al.	5/6/1980	
	E12	2004/0150129		Hougham et al.	8/5/2004	
	E13	2004/0202865		Homola et al.	10/14/2004	
	E14	5,937,758		Maracas et al.	8/17/1999	
	E15	6,753,131	B1	Rogers et al.	6/22/2004	
	E16	5,956,216		Chou	9/21/1999	
✓	E17	5,820,769		Chou	10/13/1998	

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EC	E19	WO	87/02935		Long et al.	5/21/1987		
	E20	JP	1-196749		Matsumoto et al.	8/8/1989		
	E21	JP	02192045		Mineo et al.	7/27/1990		
	E22	WO	01/90816		Heidari	11/29/2001		
	E23	WO	02/22916		Pettersson et al.	3/21/2002		
	E24	EP	1460738	A2	Gimkiewicz et al.	9/22/2004		
	E25	JP	61-40845		Matsuo et al.	2/27/1986		
	E26	JP	2-248480		Yoneda et al.	10/4/1990		
	E27	JP	3-90345		Nobuyoshi et al.	4/16/1991		
✓	E28	JP	9-278490		Toru et al.	10/28/1997		

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				APPLICATION NUMBER	10/755,997
				FILING DATE	01/13/2004
				FIRST NAMED INVENTOR	Bailey et al.
				Group Art Unit	1756
Sheet	4	of	6	Examiner Name	Unassigned
				Attorney Docket Number	PA99-41D21

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<i>EC</i>	E29	FEYNMAN, There's Plenty of Room at the Bottom, 12/1/1959	
	E30	XIA ET AL., Soft Lithography, Angew. Chem. Int. Ed., pp. 550 - 575 1/1/1998	
	E31	KRUG ET AL., Fine Patterning of Thin Sol-gel Films, Journal of Non-Crystalline Solids 147 & 148, pp. 447 - 450 1/1/1992	
	E32	NGUYEN, Asymmetric Fluid-Structure Dynamics in Nanoscale Imprint Lithography, The University of Texas at Austin, pp. 1 - 111 8/1/2001	
	E33	Abstract of Japanese Patent 02-92603, 8/12/2004	
	E34	Abstract of Japanese Patent 02-24848, 1/26/1990	
	E35	SOWAH, Diamond used to Break the Mould, Retrieved 9/2/2003 from URL: <a href="http://www.electronicetimes.com/story/OEG20020918S0003">http://www.electronicetimes.com/story/OEG20020918S0003</a> 9/18/2002	
	E36	Abstract of Japanese Patent 61-040845, 2/27/1986	
<i>7</i>	E37	Abstract of Japanese Patent 02-248480, 10/4/1990	

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EL	E38	Abstract of Japanese Patent 3-090345, 4/16/1991	
	E39	Abstract of Japanese Patent 09-278490, 10/28/1997	
	E40	Abstract of Japanese Patent 61-040845, 2/27/1986	
	E41	Abstract of Japanese Patent 02-248480, 10/4/1990	
	E42	GEHOSKI ET AL., Indium Tin Oxide Template Development for Step and Flash Imprint Lithography, SPIE Microlithography Conference 2/1/2005	
	E43	DAUKSHER ET AL., Repair of Step and Flash Imprint Lithography Templates, J. Vac. Sci. Technol. B 22(6), pp. 3306-3311 11/1/2004	
	E44	NORDQUIST ET AL., Image Placement Issues for ITO-based Step and Flash Imprint Lithography Templates, J. Vac. Sci. Technol. B, pp. 695-701 3/1/2004	
	E45	DAUKSHER ET AL., Step and Flash Imprint Lithography Template Characterization, from an Etch Perspective, J. Vac. Sci. Technol. B 21(6), pp. 2771-2776 11/1/2003	
✓	E46	RESNICK ET AL., Imprint Lithography: Lab Curiosity or the Real NGL?, SPIE Microlithography Conference 2/1/2003	

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EC	E47	MANCINI ET AL., Analysis of Critical Dimension Uniformity for Step and Flash Imprint Lithography, SPIE Microlithography Conference 2/1/2003	
	E48	MANCINI ET AL., Hydrogen Silsesquioxane for Direct Electron-Beam Patterning of Step and Flash Imprint Lithography Templates, J. Vac. Sci. Technol. B 20(6), pp. 2896-2901 11/1/2002	
	E49	DAUKSHER ET AL., Characterization of and Imprint Results Using Indium Tin Oxide-Based Step and Flash Imprint Lithography Templates, J. Vac. Sci. Technol. B 20(6), pp. 2857-2861 11/1/2002	
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	E51	BAILEY ET AL., Template Fabrication Schemes for Step and Flash Imprint Lithography, Microelectronic Engineering, 61-62, pp. 461-467 1/1/2002	
	E52	RESNICK ET AL., High Resolution Templates for Step and Flash Imprint Lithography, SPIE Microlithography Conference 2/1/2002	
↓	E53	RESNICK ET AL., New Methods for Fabricating Step and Flash Imprint Lithography Templates, NIST-SPIE Conference on Nanotechnology 9/1/2001	

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